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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

IMMERSION CORPORATION,
Plaintiff,
v.
FITBIT, INC.,
Defendant.

Case No. 17-CV-03886-LHK

**ORDER GRANTING IN PART AND
DENYING IN PART MOTION TO
DISMISS**

Re: Dkt. No. 23

Plaintiff Immersion Corporation (“Immersion”) filed a patent infringement suit against Defendant Fitbit, Inc. (“Fitbit”). Immersion alleges that Fitbit infringes claims of U.S. Patent No. 8,059,105 (“the ’105 Patent”), U.S. Patent No. 8,351,299 (“the ’299 Patent”), and U.S. Patent No. 8,638,301 (“the ’301 Patent”) (collectively, the “patents-in-suit”). Before the Court is Fitbit’s motion to dismiss, which contends that the asserted claims of the patents-in-suit fail to recite patent-eligible subject matter under 35 U.S.C. § 101. ECF No. 23 (“Mot.”). Having considered the submissions of the parties, the relevant law, and the record in this case, the Court GRANTS Fitbit’s motion to dismiss as to the ’301 Patent claims and DENIES Fitbit’s motion to dismiss as to the ’105 and ’299 Patent claims.

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I. BACKGROUND

A. Factual Background

1. The Parties and Technology at Issue

Plaintiff Immersion is a Delaware corporation with its principal place of business in San Jose, California. ECF No. 1 (“Compl.”) at ¶ 24. Immersion pioneered the use of haptic effects,¹ such as tactile vibrations and forces, in electronic devices. *Id.* ¶ 2. “Haptic effects . . . can be produced by actuators, or motors, which create a vibration, jolt, pulse, spatial texture, or other physical sensation. Haptic hardware devices are often combined with software simulating the way in which objects interact through the sense of touch.” *Id.* ¶ 3. Immersion first introduced haptic feedback in video game controllers in the 1990s, and since then has developed haptic feedback technology for use in “console, PC, and mobile gaming” as well as in other devices, including wearable devices. *Id.* ¶ 18.

Defendant Fitbit, which sells wearable fitness trackers, is a Delaware corporation with its principal place of business in San Francisco, California. *Id.* ¶ 25. Some of Fitbit’s products include haptic feedback features, such as a silent alarm that vibrates to wake the user from sleep. *Id.* ¶ 10. Other haptic feedback features include haptic confirmation of commands and haptic notification of incoming phone calls. *Id.* Immersion alleges that these products infringe Immersion’s ’105, ’299, and ’301 Patents. The Court next summarizes these patents.

2. The ’105 Patent

The ’105 Patent is titled “Haptic Feedback for Touchpads and Other Touch Controls.” Compl. Exh. A (’105 patent). It was filed on January 14, 2008 and was issued on November 15, 2011. *Id.*

Most of the claims in the ’105 Patent generally relate to a device, such as a laptop computer touchpad mouse, that facilitates a user’s interaction with a computer and that can provide haptic feedback to the user. ’105 patent at col. 1:28-32, col. 2:7-10. Specifically, the ’105

¹ “The word ‘haptics’ originates from the Greek word *haptikos*, meaning to be able to grasp and perceive by touch.” Compl. ¶ 3.

1 Patent is directed to a haptic feedback device such as a touchpad provided on a portable computer,
2 or a touch screen found on a variety of devices. *Id.* at col. 2:7-10. The touch control “inputs a
3 position signal to a processor of the computer based on a location of user contact on the touch
4 surface. The computer can position a cursor in a displayed graphical environment based at least in
5 part on the position signal, or perform a different function.” ’105 patent abstract. “At least one
6 actuator is also coupled to the touch input device and outputs a force to provide a haptic sensation
7 to the user contacting the touch surface.” *Id.* The haptic feedback is “preferably a linear force
8 output approximately perpendicularly to a plane of the touch surface of the touch input device, and
9 the actuator can include a piezo-electric actuator, a voice coil actuator, a pager motor, a solenoid,
10 or other type of actuator.” *Id.* at col. 2:34-38.

11 “The haptic sensations, such as a pulse, vibration, or spatial texture, are preferably output
12 in accordance with an interaction of a controlled cursor with a graphical object in the graphical
13 environment.” *Id.* at col. 2:48-51. “For example, a pulse can be output when the cursor is moved
14 between menu elements in a menu, moved over said icon, or moved over a hyperlink.” *Id.* col.
15 2:51-53. Such haptic feedback “can assist and inform the user of interactions and events within a
16 graphical user interface or other environment and ease cursor targeting tasks.” *Id.* at col. 2:63-66.
17 “User-independent events can also be relayed to the user using haptic sensations on the touchpad.”
18 *Id.* at col. 12:50-51. For example, “an appointment reminder, receipt of email, explosion in a
19 game, etc., can be signified using a vibration, pulse, or other time-based force.” *Id.* at col. 12:51-
20 54.

21 The specification of the ’105 Patent describes several embodiments. First and most
22 prominently, the specification describes a touchpad mouse for a laptop computer. *Id.* at col. 3:32-
23 col. 6:43 & fig. 1. Another disclosed embodiment is a touchpad on a remote control device, such
24 as a television remote control. *Id.* at col. 6:44-col. 7:8 & fig. 2. The specification also describes a
25 touch screen device, such as a touch screen PDA. *Id.* at col. 15:15-col. 16:17 & fig. 8A.

26 Immersion asserts “at least claims 19, 20, and 21” of the ’105 Patent. Compl. ¶ 44; Opp’n
27 at 7 n.1. In the Complaint, Immersion identified claim 19 as a representative claim. Compl. ¶ 45.

1 Claim 19 differs from many of the other claims of the '105 Patent because it does not appear to be
2 limited to a touch screen or a touch input device.

3 Independent claim 19 and dependent claims 20 and 21 recite:

4 19. A haptic feedback device, comprising:

5 one or more processors configured to receive an input signal and generate a
6 force signal based on the input signal,

7 wherein the input signal is associated with a user-independent event,

8 the user-independent event comprising one or more of a reminder event, an
9 initiation of a task, a processing of the task, a conclusion of the task, a receipt
of an email, or an event occurring in a game; and

10 one or more actuators configured to receive the force signal and impart a
haptic effect based on the force signal.

11 20. The haptic feedback device of claim 19, wherein the haptic feedback device
12 comprises a portable computing device, a PDA, a pager, or a cellular phone.

13 21. The haptic feedback device of claim 19, wherein the [haptic feedback]² device
14 comprises a touch screen, a touch pad, or a keypad.

'105 patent at col. 18:42-58.

15 **3. The '299 Patent**

16 The '299 Patent is titled "Apparatus and Method for Providing Condition-Based
17 Vibrotactile Feedback." Compl. Exh. B ('299 patent). It was filed on May 4, 2009 and was issued
18 on January 8, 2013. *Id.*

19 The '299 Patent generally relates to systems and methods for monitoring motion
20 parameters of an object manipulated by a user and providing notification once a certain target is
21 reached. '299 patent abstract; '299 patent at col. 2:9-11. In some embodiments and in the claims
22 asserted here, notification is provided in the form of haptic feedback. '299 patent at col. 2:23-24,
23 col. 12:27-67, col. 13:4-5. For example, one embodiment discussed at length in the specification
24 is a toothbrush that monitors the number of brush strokes that a user has completed. *Id.* at col.
25 1:23-col. 5:15 & fig. 1. The monitoring system "includes a motion sensing device 20, a

26 _____
27 ² Claim 21 initially used the phrase "touch input device" here, but the patent was officially
28 corrected to replace "touch input" with "haptic feedback." *See* ECF No. 1-1 at 23.

1 processing device 22, and an alerting device 24. Motion sensing device 20 detects motion of
2 toothbrush 10 caused by the user manipulating toothbrush 10, and more particularly may detect
3 motion only in a regular brushing pattern.” *Id.* at col. 4:20-25. The specification discloses several
4 embodiments of a motion sensing device, including an accelerometer, a combination of at least
5 one magnetic element and at least one electrical element, a “ball in a cage” configuration, and a
6 force sensor including a piezoelectric element. *Id.* at col. 5:40-col. 6:32.

7 The processing device “is associated with or includes a counter that is configured to count
8 the number of strokes or stroke cycles to determine when a predetermined threshold is reached.”
9 *Id.* at col. 4:30-33. “When the accumulative total reaches a predetermined threshold, processing
10 device 22 determines that the user has brushed for an adequate amount.” *Id.* at col. 4:46-50.
11 “When it is determined that the threshold is reached, processing device 22 instructs alerting device
12 24 to send an alert to the user indicating that the threshold has been reached.” *Id.* at col. 4:55-58.

13 In addition to the toothbrush, the specification describes other embodiments including a
14 manual ventilator and an exercise strap with vibrotactile feedback. *Id.* at col. 8:59-col. 10:20 &
15 fig. 6, col. 10:21-col. 11:10 & fig. 7.

16 Immersion asserts “at least claims 14, 15, 16, 18, 20 and 22” of the ’299 Patent. Compl.
17 ¶ 56. In the Complaint, Immersion identified claim 14 as a representative claim. *Id.* ¶ 57. The
18 asserted claims recite:

19 14. An apparatus comprising:

20 a sensor that senses motion of at least a portion of the apparatus and provides
21 a sensor output based on the sensed motion;

22 a timer that provides a periodic timer output;

23 a vibrotactile device responsive to the timer that provides a corresponding
24 periodic haptic output; and

25 a processing device that receives the sensor output and accumulates counts
26 associated with the sensor output, the processing device providing an output to
27 the vibrotactile device providing an output to the vibrotactile device once a
28 threshold associated with the accumulated counts is reached.

15. The apparatus of claim 14, wherein the periodic timer output is adjustable.

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16. The apparatus of claim 14, wherein the periodic timer output is user-selectable.

18. The apparatus of claim 14, wherein the sensor comprises an accelerometer.

20. An apparatus comprising:

- a housing;
- a sensor coupled to the housing that senses motion of the housing and provides a sensor output based on if the sensed motion exceeds a predetermined threshold;
- a timer coupled to the housing that measures at least one time period and provides a timer output on expiration of the at least one time period; and
- a vibrotactile device that provides a haptic output based on the sensor output if the vibrotactile device receives the sensor output before the timer output and provides the haptic output based on the timer output if the vibrotactile device receives the timer output before the sensor output.

22. The apparatus of claim 20, wherein the sensor comprises an accelerometer.

'299 patent at col. 12:27-col. 13:4-5.

4. The '301 Patent

The '301 Patent is titled "Systems and Methods for Transmitting Haptic Messages." Compl. Exh. C ('301 patent). It was filed on July 14, 2009 and was issued on January 28, 2014.

The '301 Patent is "directed to systems and methods for mobile devices to be configured to exchange data or messages with each other via network interfaces and provide haptic effects partially based on the exchanged data or messages transmitting haptic messages." Compl. ¶ 35. The specification identifies a mobile phone as an illustrative embodiment. '301 patent at col. 2:58-59. The illustrative device contains a "display, a user interface device, memory, and a processor in communication with each of these elements." *Id.* at col. 3:1-3. The illustrative device also contains a "sensor configured to sense a user's physical interaction with the mobile device," and an actuator "configured to output a haptic effect to the user." *Id.* at col. 3:8-9.

Figure 18 illustrates the steps of the overall operation of one of the methods of transmitting haptic messages:

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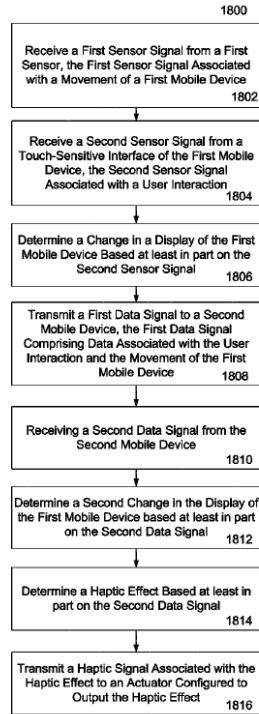


Figure 18

The specification provides details about implementing the steps in the process. “Users may interact with the user interface through movements or gestures,” which the sensors detect. ’301 patent at col. 7:7-9. “As the user tilts, shakes, thrusts, or otherwise moves mobile device 102, the one or more sensors 114 detect these movements” and send signals to the processor. *Id.* at col. 7:9-13. “The signals may comprise one or more of: angle of the movement, speed of the movement, distance covered by the movement, or X-Y orientation of the movement.” *Id.* at col. 7:13-16; *see also id.* at col. 24:22-35 (describing different user movements). The processor then determines a change in a display of the mobile device based at least in part on the sensor signals. *Id.* col. 24:51-53. “Next, the processor 110 transmits a first data signal to a second mobile device, the first data signal comprising data associated with the user interaction and the movement of the first mobile device 1808.” *Id.* at col. 24:63-66.

“Then, the processor 110 receives a second data signal from the second mobile device 1810.” *Id.* at col. 25:6-7. “Next, processor 110 determines a second change in the display of the first mobile device based at least in part on the second data signal 1812.” *Id.* at col. 25:15-17. “For example, the user of the second mobile device may move their finger across the second

1 mobile device to draw a picture. The second mobile device may then transmit a corresponding
2 second signal to the first mobile device. The processor 110 of the first mobile device may then
3 modify its display in a way that substantially correspond[s] to the display of the second mobile
4 device.” *Id.* at col. 25:22-28.

5 “Then, processor 110 determines a haptic effect based at least in part on the second data
6 signal 1814.” *Id.* at col. 25:33-34. In some embodiments, a user may embed a haptic effect into a
7 message. *Id.* at col. 10:19-20. “For example, in one embodiment a user may send a message
8 including the word ‘love.’ In such an embodiment, the user may append a haptic effect
9 comprising a beating heart to the word love. Then the recipient can feel the beating heart when
10 the recipient interacts with the word love.” *Id.* at col. 10:41-46.

11 “Finally, the processor 110 transmits a haptic signal associated with the haptic effect to an
12 actuator 118 configured to output the haptic effect.” *Id.* at col.25:49-51.

13 Immersion asserts “at least claims 27, 28, 29 and 31” of the ’301 Patent. Compl. ¶ 67. In
14 the Complaint, Immersion identified claim 27 as a representative claim. *Id.* ¶ 68. The asserted
15 claims recite:

16 27. A system comprising:

17 a processor configured to:

18 receive a first sensor signal from a first sensor, the first sensor configured to
19 detect a movement of a first mobile device;

20 receive a second sensor signal from a second sensor, the second sensor
configured to detect an interaction with the first mobile device;

21 receive a first data signal from a network interface, the network interface
22 configured to receive signals transmitted by a second mobile device;

23 determine a change in a display signal based at least in part on the first data
signal and the second sensor signal;

24 determine a haptic effect based at least in part on the first data signal; and

25 outputting [sic] the haptic effect.

26 28. The system of claim 27, wherein the first sensor and the second sensor are
27 each configured to detect one or more of: contact, pressure, acceleration,
inclination, inertia, or location.

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1 29. The system of claim 27, wherein the second sensor comprises a touch-screen.

2 31. The system of claim 27, wherein the processor is further configured to
3 transmit a second data signal to the network interface, and the network interface is
4 further configured to transmit the second data signal to the second mobile device.

5 '301 patent at col. 28:26-54.

6 **B. Procedural History**

7 On July 10, 2017, Immersion filed the instant patent infringement suit. ECF No. 1.
8 Immersion alleges that Fitbit “ha[s] infringed and continue[s] to infringe, directly and indirectly
9 through induced and/or contributory infringement,” the patents-in-suit. *Id.* ¶ 41. The products
10 accused include the Fitbit Flex, Fitbit Flex 2, Fitbit Alta, Fitbit Alta HR, Fitbit Charge, Fitbit
11 Charge 2, Fitbit Charge HR, Fitbit Blaze, and Fitbit Surge. *Id.*

12 On October 4, 2017, Fitbit filed the instant motion to dismiss. ECF No. 23 (“Mot.”). On
13 November 1, 2017, Immersion filed an opposition. ECF No. 36 (“Opp’n”). On November 17,
14 2017, Fitbit filed a reply. ECF No. 41 (“Reply”).

15 **II. LEGAL STANDARD**

16 **A. Motion to Dismiss Under Federal Rule of Civil Procedure 12(b)(6)**

17 Pursuant to Federal Rule of Civil Procedure 12(b)(6), a defendant may move to dismiss an
18 action for failure to allege “enough facts to state a claim to relief that is plausible on its face.” *Bell*
19 *Atl. Corp. v. Twombly*, 550 U.S. 544, 570 (2007). “A claim has facial plausibility when the
20 plaintiff pleads factual content that allows the court to draw the reasonable inference that the
21 defendant is liable for the misconduct alleged. The plausibility standard is not akin to a
22 ‘probability requirement,’ but it asks for more than a sheer possibility that a defendant has acted
23 unlawfully.” *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (citation omitted).

24 For purposes of ruling on a Rule 12(b)(6) motion, the Court “accept[s] factual allegations
25 in the complaint as true and construe[s] the pleadings in the light most favorable to the nonmoving
26 party.” *Manzarek v. St. Paul Fire & Marine Ins. Co.*, 519 F.3d 1025, 1031 (9th Cir. 2008).
27 Nonetheless, the Court is not required to “assume the truth of legal conclusions merely because
28 they are cast in the form of factual allegations.” *Fayer v. Vaughn*, 649 F.3d 1061, 1064 (9th Cir.

1 2011) (quoting *W. Mining Council v. Watt*, 643 F.2d 618, 624 (9th Cir. 1981)). Mere “conclusory
2 allegations of law and unwarranted inferences are insufficient to defeat a motion to dismiss.”
3 *Adams v. Johnson*, 355 F.3d 1179, 1183 (9th Cir. 2004). Furthermore, “[a] plaintiff may plead
4 [him]self out of court” if he “plead[s] facts which establish that he cannot prevail on his . . .
5 claim.” *Weisbuch v. County of Los Angeles*, 119 F.3d 778, 783 n.1 (9th Cir. 1997) (quoting
6 *Warzon v. Drew*, 60 F.3d 1234, 1239 (7th Cir. 1995)).

7 **B. Motion to Dismiss for Patent Eligibility Challenges Under 35 U.S.C. § 101**

8 Fitbit’s motion argues that the patents-in-suit fail to claim patent-eligible subject matter
9 under 35 U.S.C. § 101 in light of the U.S. Supreme Court’s decision in *Alice Corp. Pty. Ltd. v.*
10 *CLS Bank International*, 134 S. Ct. 2347 (2014). The ultimate question whether a claim recites
11 patent-eligible subject matter under § 101 is a question of law. *Intellectual Ventures I LLC v.*
12 *Capital One Fin. Corp.*, 850 F.3d 1332, 1338 (Fed. Cir. 2017) (“Patent eligibility under § 101 is
13 an issue of law[.]”); *In re Roslin Inst. (Edinburgh)*, 750 F.3d 1333, 1335 (Fed. Cir. 2014) (same).
14 However, the Federal Circuit has identified that there are certain factual questions underlying the
15 § 101 analysis. *See Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368-69 (Fed. Cir. 2018).
16 Accordingly, a district court may resolve the issue of patent eligibility under § 101 by way of a
17 motion to dismiss. *See, e.g., Secured Mail Sols. LLC v. Universal Wilde, Inc.*, 873 F.3d 905, 912
18 (Fed. Cir. 2017) (affirming determination of ineligibility made on 12(b)(6) motion); *Content*
19 *Extraction & Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*, 776 F.3d 1343, 1345 (Fed. Cir.
20 2014) (same).

21 Although claim construction is often desirable, and may sometimes be necessary, to
22 resolve whether a patent claim is directed to patent-eligible subject matter, the Federal Circuit has
23 explained that “claim construction is not an inviolable prerequisite to a validity determination
24 under § 101.” *Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Can. (U.S.)*, 687 F.3d 1266,
25 1273 (Fed. Cir. 2012). Where the court has a “full understanding of the basic character of the
26 claimed subject matter,” the question of patent eligibility may properly be resolved on the
27 pleadings. *Content Extraction*, 776 F.3d at 1349; *see also Genetic Techs. Ltd. v. Bristol-Myers*

1 *Squibb Co.*, 72 F. Supp. 3d 521, 539 (D. Del. 2014), *aff'd sub nom. Genetic Techs. Ltd. v. Merial*
2 *L.L.C.*, 818 F.3d 1369 (Fed. Cir. 2016).

3 **C. Substantive Legal Standards Applicable Under 35 U.S.C. § 101**

4 **1. Patent-Eligible Subject Matter Under 35 U.S.C. § 101**

5 Section 101 of Title 35 of the United States Code “defines the subject matter that may be
6 patented under the Patent Act.” *Bilski v. Kappos*, 561 U.S. 593, 601 (2010). Under § 101, the
7 scope of patentable subject matter encompasses “any new and useful process, machine,
8 manufacture, or composition of matter, or any new and useful improvement thereof.” *Id.* (quoting
9 35 U.S.C. § 101). These categories are broad, but they are not limitless. Section 101 “contains an
10 important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not
11 patentable.” *Alice*, 134 S. Ct. at 2354 (citation omitted). These three categories of subject matter
12 are excepted from patent-eligibility because “they are the basic tools of scientific and
13 technological work,” which are “free to all men and reserved exclusively to none.” *Mayo*
14 *Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71 (2012) (citations omitted). The
15 U.S. Supreme Court has explained that allowing patent claims for such purported inventions
16 would “tend to impede innovation more than it would tend to promote it,” thereby thwarting the
17 primary object of the patent laws. *Id.* However, the U.S. Supreme Court has also cautioned that
18 “[a]t some level, all inventions embody, use, reflect, rest upon, or apply laws of nature, natural
19 phenomena, or abstract ideas.” *Alice*, 134 S. Ct. at 2354 (alteration, internal quotation marks, and
20 citation omitted). Accordingly, courts must “tread carefully in construing this exclusionary
21 principle lest it swallow all of patent law.” *Id.*

22 In *Alice*, the leading case on patent-eligible subject matter under § 101, the U.S. Supreme
23 Court refined the “framework for distinguishing patents that claim laws of nature, natural
24 phenomena, and abstract ideas from those that claim patent-eligible applications of those
25 concepts” originally set forth in *Mayo*, 566 U.S. at 77. *Alice*, 134 S. Ct. at 2355. This analysis,
26 generally known as the “*Alice*” framework, proceeds in two steps as follows:

27 First, we determine whether the claims at issue are directed to one of those patent-

ineligible concepts. If so, we then ask, “[w]hat else is there in the claims before us?” To answer that question, we consider the elements of each claim both individually and “as an ordered combination” to determine whether the additional elements “transform the nature of the claim” into a patent-eligible application. We have described step two of this analysis as a search for an “inventive concept”—*i.e.*, an element or combination of elements that is “sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.”

Id. (alterations in original) (citations omitted); *see also In re TLI Commc’ns LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016) (describing “the now familiar two-part test described by the [U.S.] Supreme Court in *Alice*”).

2. *Alice* Step One—Identification of Claims Directed to an Abstract Idea

Neither the U.S. Supreme Court nor the Federal Circuit has set forth a bright-line test separating abstract ideas from concepts that are sufficiently concrete so as to require no further inquiry under the first step of the *Alice* framework. *See, e.g., Alice*, 134 S. Ct. at 2357 (noting that “[the U.S. Supreme Court] need not labor to delimit the precise contours of the ‘abstract ideas’ category in this case”); *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014) (observing that the U.S. Supreme Court did not “delimit the precise contours of the ‘abstract ideas’ category” in *Alice* (citation omitted)). As a result, in evaluating whether particular claims are directed to patent-ineligible abstract ideas, courts have generally begun by “compar[ing] claims at issue to those claims already found to be directed to an abstract idea in previous cases.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334 (Fed. Cir. 2016).

Two of the U.S. Supreme Court’s leading cases concerning the “abstract idea” exception involved claims held to be abstract because they were drawn to longstanding, fundamental economic practices. *See Alice*, 134 S. Ct. at 2356 (claims “drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk” were directed to a patent-ineligible abstract idea); *Bilski*, 561 U.S. at 611-12 (claims drawn to “the basic concept of hedging, or protecting against risk” were directed to a patent-ineligible abstract idea because “[h]edging is a fundamental economic practice long prevalent in our system of commerce and taught in any introductory finance class” (citation omitted)).

1 Similarly, the U.S. Supreme Court has recognized that information itself is intangible. *See*
 2 *Microsoft Corp. v. AT & T Corp.*, 550 U.S. 437, 451 n.12 (2007). Accordingly, the Federal
 3 Circuit has generally found claims abstract where they are directed to some combination of
 4 acquiring information, analyzing information, and/or displaying the results of that analysis. *See*
 5 *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1094-95 (Fed. Cir. 2016) (claims
 6 “directed to collecting and analyzing information to detect misuse and notifying a user when
 7 misuse is detected” were drawn to a patent-ineligible abstract idea); *Elec. Power Grp., LLC v.*
 8 *Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016) (claims directed to an abstract idea because
 9 “[t]he advance they purport to make is a process of gathering and analyzing information of a
 10 specified content, then displaying the results, and not any particular assertedly inventive
 11 technology for performing those functions”); *In re TLI Commc’ns LLC*, 823 F.3d at 611 (claims
 12 were “directed to the abstract idea of classifying and storing digital images in an organized
 13 manner”); *see also Elec. Power Grp.*, 830 F.3d at 1353-54 (collecting cases).

14 However, the determination of whether other types of computer-implemented claims are
 15 abstract has proven more “elusive.” *See, e.g., Internet Patents Corp. v. Active Network, Inc.*, 790
 16 F.3d 1343, 1345 (Fed. Cir. 2015) (“[P]recision has been elusive in defining an all-purpose
 17 boundary between the abstract and the concrete[.]”). As a result, in addition to comparing claims
 18 to prior U.S. Supreme Court and Federal Circuit precedents, courts considering computer-
 19 implemented inventions have taken varied approaches to determining whether particular claims
 20 are directed to an abstract idea.

21 For example, courts have considered whether the claims “purport to improve the
 22 functioning of the computer itself,” *Alice*, 134 S. Ct. at 2359, which may suggest that the claims
 23 are not abstract, or instead whether “computers are invoked merely as a tool” to carry out an
 24 abstract process, *Enfish*, 822 F.3d at 1336; *see also id.* at 1335 (“[S]ome improvements in
 25 computer-related technology when appropriately claimed are undoubtedly not abstract, such as a
 26 chip architecture, an LED display, and the like. Nor do we think that claims directed to software,
 27 as opposed to hardware, are inherently abstract[.]”). The Federal Circuit has followed this

1 approach to find claims patent-eligible in several cases. *See Visual Memory LLC v. NVIDIA*
 2 *Corp.*, 867 F.3d 1253, 1259–60 (Fed. Cir. 2017) (claims directed to an improved memory system
 3 were not abstract because they “focus[ed] on a ‘specific asserted improvement in computer
 4 capabilities’—the use of programmable operational characteristics that are configurable based on
 5 the type of processor” (quoting *Enfish*, 822 F.3d at 1336)); *McRO, Inc. v. Bandai Namco Games*
 6 *Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016) (claims directed to automating part of a preexisting
 7 method for 3-D facial expression animation were not abstract because they “focused on a specific
 8 asserted improvement in computer animation, i.e., the automatic use of rules of a particular type”);
 9 *Enfish*, 822 F.3d at 1335–36 (claims directed to a specific type of self-referential table in a
 10 computer database were not abstract because they focused “on the specific asserted improvement
 11 in computer capabilities (i.e., the self-referential table for a computer database)”).

12 Similarly, the Federal Circuit has found that claims directed to a “new and useful
 13 technique” for performing a particular task were not abstract. *See Thales Visionix Inc. v. United*
 14 *States*, 850 F.3d 1343, 1349 (Fed. Cir. 2017) (holding that “claims directed to a new and useful
 15 technique for using sensors to more efficiently track an object on a moving platform” were not
 16 abstract); *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1048, 1050 (Fed. Cir. 2016)
 17 (holding that claims directed to “a new and useful laboratory technique for preserving
 18 hepatocytes,” a type of liver cell, were not abstract); *see also Diamond v. Diehr*, 450 U.S. 175,
 19 187 (1981) (holding that claims for a method to cure rubber that employed a formula to calculate
 20 the optimal cure time were not abstract).

21 Another helpful tool used by courts in the abstract idea inquiry is consideration of whether
 22 the claims have an analogy to the brick-and-mortar world, such that they cover a “fundamental . . .
 23 practice long prevalent in our system.” *Alice*, 134 S. Ct. at 2356; *see, e.g., Intellectual Ventures I*
 24 *LLC v. Symantec Corp.*, 838 F.3d 1307, 1317 (Fed. Cir. 2016) (finding an email processing
 25 software program to be abstract through comparison to a “brick-and-mortar” post office);
 26 *Intellectual Ventures I LLC v. Symantec Corp.*, 100 F. Supp. 3d 371, 383 (D. Del. 2015) (“Another
 27 helpful way of assessing whether the claims of the patent are directed to an abstract idea is to

1 consider if all of the steps of the claim could be performed by human beings in a non-
2 computerized ‘brick and mortar’ context.” (citing *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350,
3 1353 (Fed. Cir. 2014)).

4 Courts will also (or alternatively, as the facts require) consider a related question of
5 whether the claims are, in essence, directed to a mental process or a process that could be done
6 with pencil and paper. *See Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1147 (Fed.
7 Cir. 2016) (claims for translating a functional description of a logic circuit into a hardware
8 component description of the logic circuit were patent-ineligible because the “method can be
9 performed mentally or with pencil and paper”); *CyberSource Corp. v. Retail Decisions, Inc.*, 654
10 F.3d 1366, 1372 (Fed. Cir. 2011) (claim for verifying the validity of a credit card transaction over
11 the Internet was patent-ineligible because the “steps can be performed in the human mind, or by a
12 human using a pen and paper”); *see also, e.g., Mortg. Grader, Inc. v. First Choice Loan Servs.*
13 *Inc.*, 811 F.3d 1314, 1324 (Fed. Cir. 2016) (claims for computer-implemented system to enable
14 borrowers to shop for loan packages anonymously were abstract where “[t]he series of steps
15 covered by the asserted claims . . . could all be performed by humans without a computer”).³

16 Regardless of the particular analysis that is best suited to the specific facts at issue in a
17 case, however, the Federal Circuit has emphasized that “the first step of the [*Alice*] inquiry is a
18 meaningful one, i.e., . . . a substantial class of claims are *not* directed to a patent-ineligible
19 concept.” *Enfish*, 822 F.3d at 1335. The court’s task is thus not to determine whether claims
20 merely involve an abstract idea at some level, *see id.*, but rather to examine the claims “in their
21 entirety to ascertain whether their character as a whole is directed to excluded subject matter,”
22 *Internet Patents*, 790 F.3d at 1346.

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25 ³ One court has noted that, like all tools of analysis, the “pencil and paper” analogy must not be
26 unthinkingly applied. *See Cal. Inst. of Tech. v. Hughes Commc’ns Inc.*, 59 F. Supp. 3d 974, 995
27 (C.D. Cal. 2014) (viewing pencil-and-paper test as a “stand-in for another concern: that humans
28 engaged in the same activity long before the invention of computers,” and concluding that test was
unhelpful where “error correction codes were not conventional activity that humans engaged in
before computers”).

1 **3. Alice Step Two—Evaluation of Abstract Claims for a Limiting Inventive Concept**

2 A claim drawn to an abstract idea is not necessarily invalid if the claim’s limitations—
3 considered individually or as an ordered combination—serve to “transform the claims into a
4 patent-eligible application.” *Content Extraction*, 776 F.3d at 1348. Thus, the second step of the
5 *Alice* analysis (the search for an “inventive concept”) asks whether the claim contains an element
6 or combination of elements that “ensure[s] that the patent in practice amounts to significantly
7 more than a patent upon the [abstract idea] itself.” 134 S. Ct. at 2355 (citation omitted).

8 The U.S. Supreme Court has made clear that transforming an abstract idea to a patent-
9 eligible application of the idea requires more than simply reciting the idea followed by “apply it.”
10 *Id.* at 2357 (quoting *Mayo*, 566 U.S. at 72). In that regard, the Federal Circuit has repeatedly held
11 that “[f]or the role of a computer in a computer-implemented invention to be deemed meaningful
12 in the context of this analysis, it must involve more than performance of ‘well-understood, routine,
13 [and] conventional activities previously known to the industry.’” *Content Extraction*, 776 F.3d at
14 1347-48 (alteration in original) (quoting *Alice*, 134 S. Ct. at 2359); *see also Mortg. Grader*, 811
15 F.3d at 1324-25 (holding that “generic computer components such as an ‘interface,’ ‘network,’
16 and ‘database’ . . . do not satisfy the inventive concept requirement”); *Bancorp Servs.*, 687 F.3d at
17 1278 (“To salvage an otherwise patent-ineligible process, a computer must be integral to the
18 claimed invention, facilitating the process in a way that a person making calculations or
19 computations could not.”).

20 Likewise, “[i]t is well-settled that mere recitation of concrete, tangible components is
21 insufficient to confer patent eligibility to an otherwise abstract idea” where those components
22 simply perform their “well-understood, routine, conventional” functions. *In re TLI Commc’ns*
23 *LLC*, 823 F.3d at 613 (citation omitted); *see also id.* (ruling that “telephone unit,” “server,” “image
24 analysis unit,” and “control unit” limitations were insufficient to satisfy *Alice* step two where
25 claims were drawn to abstract idea of classifying and storing digital images in an organized
26 manner). “The question of whether a claim element or combination of elements is well-
27 understood, routine and conventional to a skilled artisan in the relevant field is a question of fact”

1 that “must be proven by clear and convincing evidence.” *Berkheimer*, 881 F.3d at 1368. This
2 inquiry “goes beyond what was simply known in the prior art.” *Id.* at 1369.

3 In addition, the U.S. Supreme Court explained in *Bilski* that “limiting an abstract idea to
4 one field of use or adding token postsolution components [does] not make the concept patentable.”
5 561 U.S. at 612 (citing *Parker v. Flook*, 437 U.S. 584 (1978)); *see also Alice*, 134 S. Ct. at 2358
6 (same). The Federal Circuit has similarly stated that attempts “to limit the use of the abstract idea
7 to a particular technological environment” are insufficient to render an abstract idea patent-
8 eligible. *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 716 (Fed. Cir. 2014) (internal quotation
9 marks and citation omitted); *see also Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792
10 F.3d 1363, 1366 (Fed. Cir. 2015) (“An abstract idea does not become nonabstract by limiting the
11 invention to a particular field of use or technological environment, such as the Internet.”).

12 In addition, a “non-conventional and non-generic arrangement of known, conventional
13 pieces” can amount to an inventive concept. *BASCOM Glob. Internet Servs., Inc. v. AT&T
14 Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016). For example, in *BASCOM*, the Federal
15 Circuit addressed a claim for Internet content filtering performed at “a specific location, remote
16 from the end-users, with customizable filtering features specific to each end user.” *Id.* Because
17 this “specific location” was different from the location where Internet content filtering was
18 traditionally performed, the Federal Circuit concluded this was a “non-conventional and non-
19 generic arrangement of known, conventional pieces” that provided an inventive concept. *Id.* As
20 another example, in *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, the Federal Circuit held that
21 claims relating to solutions for managing accounting and billing data over large, disparate
22 networks recited an inventive concept because they contained “specific enhancing limitation[s]
23 that necessarily incorporate[d] the invention’s distributed architecture.” 841 F.3d 1288, 1301
24 (Fed. Cir. 2016), *cert. denied*, 138 S. Ct. 469 (Nov. 27, 2017). The use of a “distributed
25 architecture,” which stored accounting data information near the source of the information in the
26 disparate networks, transformed the claims into patentable subject matter. *Id.*

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1 **4. Preemption**

2 In addition to these principles, courts sometimes find it helpful to assess claims against the
3 policy rationale for § 101. The U.S. Supreme Court has recognized that the “concern that
4 undergirds [the] § 101 jurisprudence” is preemption. *Alice*, 134 S. Ct. at 2358. Thus, courts have
5 readily concluded that a claim is not patent-eligible when the claim is so abstract that it preempts
6 “use of [the claimed] approach in all fields” and “would effectively grant a monopoly over an
7 abstract idea.” *Bilski*, 561 U.S. at 612. However, the inverse is not true: “[w]hile preemption may
8 signal patent ineligible subject matter, the absence of complete preemption does not demonstrate
9 patent eligibility.” *FairWarning*, 839 F.3d at 1098 (alteration in original) (citation omitted).

10 **III. DISCUSSION**

11 Fitbit’s motion to dismiss contends that the asserted claims of the patents-in-suit fall within
12 the patent-ineligible “abstract ideas” exception to § 101. The Court applies the *Alice* framework
13 described above to these claims. However, the Court need not individually analyze every claim if
14 certain claims are representative. *See generally Alice*, 134 S. Ct. at 2359-60 (finding claims to be
15 patent-ineligible based on analysis of one representative claim). Here, the parties agree that claim
16 19 of the ’105 Patent and claim 27 of the ’301 Patent are representative. Mot. at 4, 8; Compl.
17 ¶¶ 45, 68. Immersion asserts claim 14 of the ’299 Patent is representative, Compl. ¶ 57, while
18 Fitbit contends that claim 20 of the ’299 Patent is representative, Mot. at 7. As a result, the Court
19 analyzes claim 19 of the ’105 Patent, claims 14 and 20 of the ’299 Patent, and claim 27 of the ’301
20 Patent.

21 **A. The ’105 Patent**

22 **1. *Alice* Step One for Claim 19 of the ’105 Patent—Whether the Claim Is Directed to**
23 **an Abstract Idea**

24 Step one of the *Alice* framework directs the Court to assess “whether the claims at issue are
25 directed to [an abstract idea].” *Alice*, 134 S. Ct. at 2355. The step one inquiry “applies a stage-
26 one filter to claims, considered in light of the specification, based on whether ‘their character as a
27 whole is directed to excluded subject matter.’” *Enfish*, 822 F.3d at 1335 (citation omitted). Thus,

1 the Court conducts its step one inquiry by first identifying what the “character as a whole” of
2 claim 19 of the ’105 Patent is “directed to,” and then discussing whether this is an abstract idea.
3 In distilling the character of a claim, the Court is careful not to express the claim’s focus at an
4 unduly “high level of abstraction . . . untethered from the language of the claims,” but rather at a
5 level consonant with the level of generality or abstraction expressed in the claims themselves.
6 *Enfish*, 822 F.3d at 1337; *see also Thales Visionix*, 850 F.3d at 1347 (“We must therefore ensure at
7 step one that we articulate what the claims are directed to with enough specificity to ensure the
8 step one inquiry is meaningful.”).

9 Fitbit argues that claim 19 of the ’105 Patent is directed to “vibrating to communicate that
10 an event that is independent of the user of a device, *e.g.*, receipt of an email, has occurred.” Mot.
11 at 9. Fitbit asserts that “[t]here is no purpose for the haptic effect beyond simply communicating
12 to the user that the event occurred.” *Id.* Fitbit cites *FairWarning* for the proposition that
13 notification is an abstract idea, and Fitbit goes on to argue that the fact that the claim is framed as
14 a device does not eliminate its abstract nature because the device comprises only generic
15 components. *Id.* at 10.

16 Immersion counters that “[c]laim 19 does not simply recite vibrating to communicate an
17 independent event, but also involves signaling through the use of a processor and actuator to
18 physically drive the felt haptic effect of a portable computer device with a touch-controlled
19 graphical user interface, in response to a pre-determined event that did not result from the user’s
20 interaction with the computer device through the user interface.” Opp’n at 9. Immersion argues
21 that “the character as a whole” of claim 19 is not abstract for three reasons. *Id.* First, the claim
22 does not concern only a mental process or information processing, but rather the claim is “tethered
23 to a physical device.” *Id.* Second, the device “creates feedback and physical sensations (such as
24 vibrating, clicks, pulses, etc.),” which differentiates the device from the generic computing
25 elements that only process information in the more typical “abstract idea” case. *Id.* Third, “claim
26 19 requires an ‘event that is independent of the user of the device,’ which itself suggests that
27 claim[] 19 is not merely an ‘abstract idea’ because the haptic effect is tied to a specific type of

1 event in a particular type of device.” *Id.*

2 Fitbit replies that claim 19’s inclusion of “‘a processor,’ an ‘actuator,’ and ‘signaling’” do
3 not affect the “directed to” inquiry, because “those items merely reflect a conventional
4 implementation of the idea.” Reply at 2. Moreover, Fitbit argues that “the mere presence of
5 physical components in the claims is insufficient to confer patent eligibility.” *Id.* at 3 (citing *Alice*,
6 134 S. Ct. at 2358). Fitbit also points out that claim 19 does not mention a “touch-controlled
7 graphical user interface,” as Immersion asserts that it does. *Id.* at 3.

8 The United States Supreme Court’s decision in *Diamond v. Diehr*, 450 U.S. 175, and the
9 Federal Circuit’s decision in *Thales Visionix*, 850 F.3d 1343, are instructive in evaluating the
10 parties’ arguments. In *Diehr*, the claimed invention was “a process for molding raw, uncured
11 synthetic rubber into cured precision products.” 450 U.S. at 177. Before the invention of the
12 claimed process, rubber manufacturers calculated how long to leave rubber in a mold press by
13 using the Arrhenius equation, which is a law of nature. *Id.* However, the industry was not able to
14 “obtain uniformly accurate cures because the temperature of the molding press could not be
15 precisely measured, thus making it difficult to do the necessary computations to determine cure
16 time.” *Id.* at 178. The new process overcame this problem by “constantly measuring the actual
17 temperature inside the mold” and then feeding the temperatures into a computer that “repeatedly
18 recalculates the cure time by use of the Arrhenius equation.” *Id.* The patent examiner rejected the
19 claims as drawn to ineligible subject matter under § 101.

20 The U.S. Supreme Court disagreed. The U.S. Supreme Court concluded that “a claim
21 drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a
22 mathematical formula, computer program, or digital computer.” *Id.* at 187. Applying that
23 conclusion to the rubber-curing process before it, the U.S. Supreme Court held that “Arrhenius’
24 equation is not patentable in isolation, but when a process for curing rubber is devised which
25 incorporates in it a more efficient solution of the equation, that process is at the very least not
26 barred at the threshold by § 101.” *Id.* at 188. The U.S. Supreme Court also explained that claims
27 “must be considered as a whole” and that “[i]t is inappropriate to dissect the claims into old and

1 new elements and then to ignore the presence of the old elements in the analysis.” *Id.*

2 The Federal Circuit applied *Diehr* in *Thales Visionix*. In *Thales Visionix*, the patent
3 disclosed an inertial tracking system for tracking the motion of an object relative to a moving
4 reference frame. The system used inertial sensors and mathematical equations to track the
5 position and orientation of the object. 850 F.3d at 1345. The trial court held that the claims were
6 directed to the abstract idea of using laws of nature governing motion to track objects at *Alice* step
7 one and that there was no inventive concept beyond the abstract idea at step two. *Id.* at 1346. The
8 Federal Circuit reversed. The Federal Circuit concluded that the claims in *Thales Visionix* were
9 “nearly indistinguishable from the claims at issue in *Diehr*” for purposes of evaluating patent
10 eligibility. *Id.* at 1348. Specifically, the Federal Circuit held that the “claims are not merely
11 directed to the abstract idea of using ‘mathematical equations for determining the relative position
12 of a moving object to a moving reference frame,’ as the [trial court] found. Rather, the claims are
13 directed to systems and methods that use inertial sensors in a non-conventional manner to reduce
14 errors in measuring the relative position and orientation of a moving object on a moving reference
15 frame.” *Id.* at 1348-49 (citation omitted).

16 The Federal Circuit in *Thales Visionix* also cautioned that “[a]t step one, ‘it is not enough
17 to merely identify a patent-ineligible concept underlying the claim; we must determine whether
18 that patent-ineligible concept is what the claim is ‘directed to.’” *Id.* at 1349 (quoting *Rapid Litig.*,
19 827 F.3d at 1050). The Federal Circuit determined that “[f]ar from claiming the equations
20 themselves, the claims seek to protect only the application of physics to the unconventional
21 configuration of sensors as disclosed.” *Id.* As such, the Federal Circuit held that the claims were
22 not directed to an abstract idea and that they survived *Alice* step one as a result. *Id.*

23 Under *Diehr* and *Thales Visionix*, it is clear that simply incorporating an abstract idea in
24 part of a claim that is otherwise directed to patentable subject matter does not necessarily render
25 the entire claim ineligible. Applying that principle to claim 19 of the ’105 Patent, the Court finds
26 that claim 19 is directed to a device that provides haptic feedback to communicate that one of
27 several predetermined user-independent events has occurred. While Fitbit is correct that

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1 notification is a prominent idea of claim 19 and that notification is an abstract idea, *see, e.g.*,
 2 *FairWarning*, 839 F.3d at 1094, characterizing claim 19 as directed only to the abstract idea of
 3 notification, or even as directed only to the abstract idea of notification through vibration, strays
 4 too far from the weight of the claim. The weight of the claim clearly focuses on a tangible, non-
 5 abstract device as the invention which, through the allegedly unconventional combination of
 6 components, contains the new and useful feature of notifying the device’s user of independent
 7 events through vibration. *See Thales Visionix*, 850 F.3d at 1348-49; ’105 patent at col. 1:64-col.
 8 2:3 (noting that touchpads of the prior art lack haptic feedback); ’105 patent at col. 12:61-67
 9 (discussing scenario in which a user is notified of an event by vibration after having looked away
 10 from the screen). Indeed, a significant majority of the specification details various physical
 11 features of the claimed inventions, including different types of actuators and how an actuator can
 12 be coupled to the housing of the device. *See* ’105 patent at col. 5:5-col. 12:49, col. 15:1-col.
 13 16:17. The fact that part of the claim contains an abstract idea does not make the claim patent-
 14 ineligible under § 101. *See Alice*, 134 S. Ct. at 2354 (“[A]n invention is not rendered ineligible for
 15 patent simply because it involves an abstract concept.”).

16 Fitbit would have the Court ignore the physical components of claim 19 because the
 17 components considered individually are not new or inventive. *See* Mot. at 10; Reply at 4.
 18 However, this argument directly contradicts *Diehr*’s admonition that “[i]t is inappropriate to
 19 dissect the claims into old and new elements and then to ignore the presence of the old elements in
 20 the analysis.” *Diehr*, 450 U.S. at 188; *see also Baxter Int’l, Inc. v. Carefusion Corp.*, No. 15-cv-
 21 9986, 2016 WL 2770787, at *9 (N.D. Ill. May 13, 2016) (“CareFusion identifies no precedent
 22 entitling a court to limit its Section 101 analysis to ‘novel’ features while ignoring the tangible
 23 components of a claimed patent. Indeed, the majority opinion in *Diehr* appears to caution against
 24 such a view.”). In addition, *Thales Visionix* makes clear that a new and useful arrangement of
 25 known components can be patent-eligible. 850 F.3d at 1348-49.

26 Moreover, the cases that Fitbit cites for the proposition that ordinary components do not
 27 render a claim patent-eligible often concern method claims that use generic computers as tools to

1 implement the abstract idea in the method. *See, e.g., Affinity Labs of Tex., LLC v. DIRECTV, LLC*,
 2 838 F.3d 1253, 1261 (Fed. Cir. 2016) (holding that method claim that implemented abstract idea
 3 using conventional tangible components was directed to an abstract idea at step one); *Elec. Power*
 4 *Grp.*, 830 F.3d at 1355 (same); *see also FairWarning*, 839 F.3d at 1096 (describing a system claim
 5 as “merely graft[ing] generic computer components onto otherwise ineligible method claims”).
 6 These cases are distinguishable from the instant claim, where the focus of the claim is a new and
 7 useful application of notification embodied in a physical device. *See Thales Visionix*, 850 F.3d at
 8 1349 (“the claims seek to protect only the application of physics to the *unconventional*
 9 *configuration* of sensors as disclosed” (emphasis added)). Here, the ’105 Patent states that no
 10 previous touchpad incorporated haptic feedback and describes the problem as how to notify a user
 11 that a task has completed or another event has occurred when the user is not looking at the screen.
 12 ’105 patent at col. 1:64-65, col. 12:61-67. Accordingly, Immersion’s invention of a touchpad or
 13 other similar device that provides haptic feedback is a new arrangement of known components that
 14 solves the problem of how to provide non-audio, non-visual notification to a user. Such an
 15 invention is patent-eligible.

16 Indeed, other district courts that have rejected § 101 challenges where the claims are
 17 directed to a physical device that merely incorporates an abstract idea as part of its operation. *See*
 18 *POWERbahn, LLC v. Found. Fitness LLC*, No. 3:15-cv-00327-MMD-WGC, 2016 WL 4318978,
 19 at *3 (D. Nev. Aug. 11, 2016) (“While it is true that the claim includes a formula, the claim is
 20 clearly directed at a piece of exercise equipment, and the formula is simply one part of the overall
 21 scheme. Including a law of nature as one part of a claim does not transform the entire scheme into
 22 an abstract idea.”); *Polaris Innovations Ltd. v. Kingston Tech. Co.*, 223 F. Supp. 3d 1026, 1034
 23 (C.D. Cal. 2016) (noting that the defendant had not “cited any case where a court found that a
 24 claim for a purportedly novel physical configuration of a piece of computer hardware was deemed
 25 patent-ineligible because it was merely the embodiment of an abstract process” and distinguishing
 26 cases involving “patented *processes* running on what the courts found to be generic hardware”);
 27 *Baxter Int’l*, 2016 WL 2770787 at *12 (declining defendant’s invitation to ignore physical

1 components of a claimed invention that were known in the prior art and instead considering the
2 patent as a whole).

3 As such, the Court concludes at step one of the *Alice* framework that claim 19 is not
4 directed to an abstract idea. Accordingly, the Court need not reach *Alice* step two. Fitbit’s motion
5 to dismiss the ’105 Patent claims is DENIED.

6 **B. The ’299 Patent**

7 **1. *Alice* Step One for Claims 14 and 20 of the ’299 Patent—Whether the Claims Are**
8 **Directed to an Abstract Idea**

9 The parties’ arguments regarding the ’299 Patent are substantially similar to their
10 arguments regarding the ’105 Patent. Fitbit argues that claim 20 of the ’299 Patent is “directed to
11 the abstract idea of vibrating to communicate movement of a device or expiration of a timer.”
12 Mot. at 15. Just as it did for the ’105 Patent, Fitbit invokes *FairWarning* to argue that notification
13 is an abstract idea, and then Fitbit argues that the physical components of the claimed device “are
14 merely generic electronic components used to perform the abstract idea.” Mot. at 16. Fitbit also
15 argues that the ’299 Patent claims “fundamental practices long prevalent in human society.” *Id.*
16 Specifically, Fitbit argues that the “concept of notifying a person when either a motion threshold
17 has been reached or time has run out has long been performed by humans,” such as a physical
18 therapist who counts the number of times a patient has performed an exercise movement and
19 notifies the patient upon completion. *Id.*

20 Immersion responds that the ’299 Patent “claims the improvement of the operation of a
21 vibrotactile device based on the timing of sensed motion and rest of a device that a user may hold
22 or wear, and it is thus not an abstract idea.” Opp’n at 17. Specifically, Immersion argues that the
23 incorporation of haptic feedback into a motion-tracking device improved upon previous motion-
24 tracking devices by enabling user notification through vibration, which is helpful in hectic
25 environments where a visual or auditory notification might not be effective. *Id.* at 17-18.
26 Immersion also disputes Fitbit’s characterization of the asserted claims in the ’299 Patent as
27 replicating longstanding human activity, as such characterization ignores the physical components

1 of the device. *Id.* at 18.

2 Fitbit responds that Immersion fails to distinguish the Federal Circuit’s cases holding that
3 collecting and analyzing data and notifying the user of the results of that analysis claim an abstract
4 idea. Reply at 9.

5 The Court finds that claim 14 of the ’299 Patent is directed to an apparatus that senses
6 motion, counts the number of motions that occur, and notifies a user through haptic feedback once
7 a threshold number of motions occur. The Court finds that claim 20 of the ’299 Patent is directed
8 to an apparatus that senses motion, tracks time, and notifies a user through haptic feedback when
9 either a threshold amount of motion occurs or time expires, whichever happens first. The Court
10 finds Fitbit’s arguments that the ’299 Patent is directed to an abstract idea unpersuasive for
11 essentially the same reasons detailed above for the ’105 Patent. Namely, characterizing claims 14
12 and 20 as directed to the abstract idea of notification based on motion or a timer ignores the fact
13 that the claimed invention is a tangible device comprising a new and useful arrangement of
14 components that solves the problem of how to notify a user that a predetermined number of
15 motions have occurred in an environment where audio or visual alerts would not be effective.⁴
16 *See Thales Visionix*, 850 F.3d at 1348-49. As such, the Court finds that claims 14 and 20 are not
17 directed to an abstract idea.

18 The Federal Circuit’s recent decision in *Core Wireless Licensing S.A.R.L. v. LG*
19 *Electronics, Inc.*, 880 F.3d 1356 (Fed. Cir. 2018), supports the Court’s conclusion that claims 14
20 and 20 are not directed to an abstract idea. The claims at issue in *Core Wireless* disclosed
21 computing devices with improved display interfaces, where the improved interfaces were
22 particularly useful for electronic devices with small screens. *Id.* at 1359. The defendant argued

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25 ⁴ The parties cite to *Fitbit Inc. v. AliphCom*, 2017 WL 819235 (N.D. Cal. Mar. 2, 2017), in which
26 another court in this district held that a Fitbit patent for a method of detecting and recording
27 physical activity of a person was directed to an abstract idea. However, that case is
28 distinguishable from the instant case for at least two reasons. First, the claim at issue in that prior
case recited a method, not a device. Second, that decision predates *Thales Visionix*, which held
that a particular, useful configuration of components that improved on the prior art was not
directed to an abstract idea. 850 F.3d at 1348-49.

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1 that the claims were directed to the abstract idea of an index, but the Federal Circuit rejected this
 2 argument. *Id.* at 1362. The Federal Circuit reasoned that “[a]lthough the generic idea of
 3 summarizing information certainly existed prior to the invention, these claims are directed to a
 4 particular manner of summarizing and presenting information in electronic devices.” *Id.* The
 5 Federal Circuit found the situation in *Core Wireless* analogous to that in *Enfish, Thales, Visual*
 6 *Memory*, and *Finjan, Inc. v. Blue Coat Systems, Inc.*, 879 F.3d 1299 (Fed. Cir. 2018), in each of
 7 which the Federal Circuit found that the claims recited a specific improvement over prior systems,
 8 which meant that the claims were not abstract. *Core Wireless*, 880 F.3d at 1363. In *Core*
 9 *Wireless*, the Federal Circuit also looked to the specification to confirm that the claims disclosed
 10 an improvement to prior systems. *Id.* The Federal Circuit concluded that the claims were
 11 “directed to an improvement in the functioning of computers, particularly those with small
 12 screens.” *Id.* As a result, the Federal Circuit held that the claims were not directed to an abstract
 13 idea at step one. *Id.*

14 In the instant case, claims 14 and 20 of the ’299 Patent disclose an improvement in motion
 15 detection devices. Before the invention described in the ’299 Patent, “there were alarms that could
 16 be triggered by timers that tracked the operation or movement of a device.” Opp’n at 15.
 17 However, such alarms provided audio or visual notification that may be ineffective when the user
 18 is “operating in hectic environments . . . and/or when bombarded with competing audio and/or
 19 visual stimuli.” *Id.*;’299 patent at col. 1:65-col. 2:5. The ’299 Patent improved the operation of
 20 these devices by adding haptic feedback, which enhances the usefulness of the devices in
 21 circumstances where audio or visual notification might not be effective. In one example described
 22 in the specification, the invention is embodied in a manual resuscitator that tracks the number of
 23 times an emergency responder has squeezed the resuscitator. *See* ’299 patent at col. 8:59-col.
 24 10:20. “Emergency rooms, trauma centers, ambulances, accident scenes, and other emergency
 25 environments are often chaotic and highly charged.” *Id.* at col.7:22-24. The addition of haptic
 26 feedback thus presents an improvement over audio and visual notifications by “operat[ing] in
 27 conjunction with the emergency personnel on a sensory channel not otherwise overloaded with

1 other stimuli.” *Id.* at col. 9:32-34. In other words, a haptic notification overcomes the challenge
2 of how to alert the user that a certain number of movements has been reached in environments
3 where audio or visual notification may be ineffective. Thus, because claim 14 and claim 20
4 disclose improvements in motion tracking devices, they are not directed to an abstract idea at step
5 one, and the Court need not reach *Alice* step two. *See Core Wireless*, 880 F.3d at 1363; *Thales*
6 *Visionix*, 850 F.3d at 1348-49.

7 As a result, Fitbit’s motion to dismiss the ’299 Patent claims is DENIED.

8 **C. The ’301 Patent**

9 **1. *Alice* Step One for Claim 27 of the ’301 Patent—Whether the Claim Is Directed to**
10 **an Abstract Idea**

11 Fitbit argues that claim 27 of the ’301 Patent is directed to “providing a vibration and
12 associated change in visual display based on interaction between two devices, *e.g.*, when a signal
13 is received by a first mobile device from a second mobile device.” Mot. at 19. Specifically, Fitbit
14 asserts that claim 27 of the ’301 Patent is directed to transmitting haptic messages. *Id.* Fitbit
15 argues that claim 27 thus “regards basic, routine functions that have been repeatedly found to be
16 abstract,” such as collecting, analyzing, and outputting information. *Id.*

17 Immersion counters that claim 27 “is directed to a processor on a (first) mobile device that
18 (1) receives a signal from a second mobile device, (2) changes the display on the first mobile
19 device based on the sensed motion of that device and another interaction of the user with the first
20 mobile device, such as with the touchscreen of the mobile device specifically (claim 29), and (3),
21 operates an actuator that physically vibrates the housing such that a tactile sensation (or haptic
22 effect) is felt on the first mobile device based on the data in the signal received from the second
23 mobile device.” Opp’n at 22. Immersion asserts that claim 27 “cover[s] an improvement on a
24 messaging system between two mobile devices to output a haptic effect based on movement of a
25 mobile device.” *Id.* According to Immersion, this improvement “solves the technological
26 problem of how to notify a user without a graphical display, or in addition to the display of
27 graphics.” *Id.* at 20.

1 Fitbit replies that claim 27’s recitation of generic data signals and generic components does
2 not render the claim non-abstract. Reply at 13-14.

3 The Court finds that claim 27 of the ’301 Patent is directed to receiving sensor and data
4 signals, analyzing those signals, and outputting other signals in response. Although claim 27
5 discloses a generic processor, the focus of the claim is on receiving various signals and
6 determining resulting output signals. Specifically, the processor is configured to receive a first
7 sensor signal related to the first device’s movement, a second sensor signal related to an
8 interaction with the first device, and a data signal from a second mobile device transmitted via a
9 network interface. ’301 patent at col. 28:26-35. Based on these signals, the processor determines
10 a change in display and a haptic effect and then the processor outputs a haptic effect. *Id.* at col.
11 28:36-41. However, the claim does not provide any limiting rules or algorithms that describe how
12 the processor performs these functions. The Court finds that claim 27 is thus directed to the
13 abstract idea for two reasons, which the Court explains in turn.

14 First, the Court finds that claim 27 falls within the category of gathering and processing
15 information, which the Federal Circuit has established is an abstract idea. Specifically, in *Electric*
16 *Power Group*, the Federal Circuit stated that “collecting information, including when limited to
17 particular content (which does not change its character as information), [i]s within the realm of
18 abstract ideas.” 830 F.3d at 1353. In addition, the Federal Circuit has treated “analyzing
19 information by steps people go through in their minds, or by mathematical algorithms, without
20 more, as essentially mental processes within the abstract-idea category.” *Id.* at 1354. The Federal
21 Circuit held in *Electric Power Group* that claims for “a process of gathering and analyzing
22 information of a specified content, then displaying the results,” which did not use “any particular
23 assertedly inventive technology for performing those functions,” were directed to an abstract idea.
24 *Id.* Similarly, in *West View Research, LLC v. Audi AG*, 685 F. App’x 923, 926 (Fed. Cir. 2017)
25 (unpublished), the Federal Circuit held that claims that “do not go beyond receiving or collecting
26 data queries, analyzing the data query, retrieving and processing the information constituting a
27 response to the initial data query, and generating a visual or audio response to the initial data

1 query” were directed to the abstract idea of collecting and analyzing information.

2 Here, the first three functions that the processor is configured to perform are receiving
3 sensor and data signals. ’301 patent at col. 28:26-35. This amounts to nothing more than
4 gathering data, which is an abstract idea. *See Elec. Power Grp.*, 830 F.3d at 1353. The next two
5 functions of the processor are determining a change in display signal and determining a haptic
6 effect based on the received signals. ’301 patent at col. 28:36-40. In other words, the processor
7 receives the sensor and data signals and, presumably applying some unspecified rules or
8 algorithms, analyzes how the display signal should change and what type of haptic effect should
9 be produced as a result of the received signals. Without specifying what particular rules or types
10 of rules are applied by the processor, claim 27 describes nothing more than generic data analysis.
11 *Cf. McRO*, 837 F.3d at 1313-1314 (claims relating to automating part of a 3-D animation method
12 that are limited to the use of a specific “genus” of rules, rather than claiming the use of all rules,
13 are not directed to an abstract idea at step one). Finally, the processor is configured to “output[]
14 the haptic effect.” ’301 patent at col. 28:41. It is not entirely clear from the claim itself whether
15 the processor outputs the haptic effect or whether the processor transmits a signal to an actuator
16 that transmits a haptic effect. The specification suggests it is the latter. *See id.* at col. 25:49-51
17 (“Finally, the processor 110 transmits a haptic signal associated with the haptic effect to an
18 actuator 118 configured to output the haptic effect.”). Transmitting a signal to an actuator does
19 not make the focus of the claim any less abstract because outputting a signal is no more than the
20 transmission of data. Similarly, the Federal Circuit has held that displaying the results of
21 collecting and analyzing information, without more, “is abstract as an ancillary part of such
22 collection and analysis.” *Elec. Power Grp.*, 830 F.3d at 1354; *see also W. View Research*, 685 F.
23 App’x at 926 (holding claim that included generating a visual or audio response to a data query is
24 directed to the abstract idea of collecting, analyzing, and displaying information).

25 Second, Claim 27 is analogous to claims that the Federal Circuit has held to be directed to
26 an abstract idea in part because they use function-based claiming. For example, the patents in
27 *Two-Way Media Ltd. v. Comcast Cable Communications, LLC*, 874 F.3d 1329 (Fed. Cir. 2017),

1 concerned “a system for streaming audio/visual data over a communications system like the
2 internet.” *Id.* at 1333. The Federal Circuit held that the claims were directed to an abstract idea in
3 part because the claims used “result-based functional language” such as “converting,” “routing,”
4 “controlling,” “monitoring,” and “accumulating records” without “sufficiently describ[ing] how to
5 achieve these results in a non-abstract way.” *Id.* at 1337. Similarly, in *DIRECTV*, the Federal
6 Circuit held that a claim that broadly disclosed “the function of wirelessly communicating regional
7 broadcast content to an out-of-region recipient, not a particular way of performing that function,”
8 was directed to an abstract idea. 838 F.3d at 1258. The Federal Circuit explained:

9 While independent claim 1 refers to general components such as a cellular
10 telephone, a graphical user interface, and a downloadable application, the claimed
11 invention is entirely functional in nature. It recites software in the form of “an
12 application configured for execution by the wireless cellular telephone device”
13 that performs three functions: (1) it presents a listing of available media choices
14 on a display on the cellular telephone; (2) it enables the telephone “to transmit a
15 request for the regional broadcasting channel”; and (3) it enables the telephone “to
16 receive a streaming media signal in the . . . device corresponding to the regional
17 broadcasting channel” when the device is outside the range of the regional
18 broadcaster. There is nothing in claim 1 that is directed to *how* to implement out-
19 of-region broadcasting on a cellular telephone. Rather, the claim is drawn to the
20 idea itself.

21 *Id.* (alteration in original).

22 In the instant case, claim 27 requires receiving sensor and data signals, determining a
23 resulting change in display, and determining a resulting haptic effect, but “[t]here is nothing in
24 claim [27] that is directed to *how* to implement” these functions. As a result, claim 27, like the
25 claims in *Two-Way Media* and *DIRECTV*, “manipulates data but fails to do so in a non-abstract
26 way.” *Two-Way Media*, 874 F.3d at 1337; *see also Secured Mail Sols.*, 873 F.3d at 911 (finding
27 claims regarding the creation of unique mail identifiers were directed to an abstract idea at step
28 one in part because the claims were “not limited by rules or steps that establish how the focus of
the methods is achieved”); *Clarilogic, Inc. v. FormFree Holdings Corp.*, 681 F. App’x 950, 954
(Fed. Cir. 2017) (unpublished) (“But a method for collection, analysis, and generation of
information reports, where the claims are not limited to how the collected information is analyzed

1 or reformed, is the height of abstraction.”); *Capital One Fin. Corp.*, 850 F.3d at 1342 (explaining
2 that “our law demands more” than claim language that “provides only a result-oriented solution,
3 with insufficient detail for how a computer accomplishes it”); *Affinity Labs of Tex., LLC v.*
4 *Amazon.com Inc.*, 838 F.3d 1266, 1269 (Fed. Cir. 2016) (“At that level of generality, the claims do
5 no more than describe a desired function or outcome, without providing any limiting detail that
6 confines the claim to a particular solution to an identified problem.”).

7 Accordingly, the Court finds that claim 27 of the ’301 Patent is directed to an abstract idea.
8 The Court next analyzes *Alice* step two.

9 **2. *Alice* Step Two for Claim 27 of the ’301 Patent—Whether the Claim Contains an**
10 **Inventive Concept**

11 “In step two of the *Alice* inquiry, [the Court] search[es] for an ‘inventive concept sufficient
12 to transform the nature of the claim into a patent-eligible application.” *RecogniCorp, LLC v.*
13 *Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) (quoting *McRO*, 837 F.3d at 1312) (internal
14 quotation marks omitted)). “To save the patent at step two, an inventive concept must be evident
15 in the claims.” *Id.* This inventive concept “must be significantly more than the abstract idea
16 itself,” *BASCOM*, 827 F.3d at 1349, “must be more than well-understood, routine, conventional
17 activity,” *DIRECTV*, 838 F.3d at 1262, “and cannot simply be an instruction to implement or
18 apply the abstract idea on a computer.” *BASCOM*, 827 F.3d at 1349. For example, it may be
19 found in an “inventive set of components or methods,” “inventive programming,” or an inventive
20 approach in “how the desired result is achieved.” *Elec. Power Grp.*, 830 F.3d at 1355.

21 Fitbit argues that claim 27’s required mobile devices, processor, sensor, display, signaling
22 protocol, and haptic mechanism are all generic, and so cannot supply an inventive concept. Mot.
23 at 21. Fitbit also argues that the ordered combination of elements in the claim does not provide an
24 inventive concept because the “combination of steps performed by the generic processor on
25 generic signals is purely conventional—receiving sensor signals and data signals and outputting
26 other signals.” *Id.*

27 Immersion responds that claim 27 “include[s] at least the inventive concept of generating

1 both graphical and haptic feedback in response to messages exchanged between mobile devices,
 2 which include information or data regarding physical interactions with those devices.” Opp’n at
 3 24. Immersion asserts that “the ’301 Patent uses a specific combination of graphical and haptic
 4 output to better notify a user of information that is sent by another mobile device, and the patent
 5 uses multiple sensors to provide information about the user’s interaction with mobile devices.” *Id.*
 6 at 25.

7 The Court finds that none of the claim elements, assessed individually, provide an
 8 inventive concept. The mobile devices, network interface, processor, and haptic feedback system
 9 are, in broad terms, generic, conventional components. The specification confirms that these are
 10 generic components. *See* ’301 patent at col. 2:66-67 (“Other mobile devices and haptic feedback
 11 systems may be utilized.”); *id.* at col. 6:46-54 (noting that the network interface “may comprise
 12 one or more methods of mobile communication, such as infrared, radio, Wi-Fi, or cellular network
 13 communication,” or a “wired network interface”); *id.* at col. 6:57-65 (describing possible types of
 14 sensors including “a position sensor, location sensor, rotational velocity sensor, image sensor,
 15 pressure sensor, or another type of sensor”); *id.* at col. 25:61-col. 26:12 (describing different types
 16 of processors). The claim calls on these generic components to perform their routine functions.
 17 Processors have long performed the functions of receiving signals, analyzing them, and outputting
 18 other signals in response. Nothing about the claim or specification suggests that the way these
 19 steps are accomplished are anything but generic—as explained above, the claims recite these steps
 20 only functionally and require no inventive algorithm or data structure for performing them. *See*
 21 *DIRECTV*, 838 F.3d at 1262 (finding no inventive concept where “[t]he claim simply recites the
 22 use of generic features of cellular telephones, such as a storage medium and a graphical user
 23 interface, as well as routine functions, such as transmitting and receiving signals, to implement the
 24 underlying idea.”).

25 Finally, the ordered combination of these elements also does not yield an inventive
 26 concept. In *BASCOM*, the Federal Circuit held that “an inventive concept can be found in the non-
 27 conventional and non-generic arrangement of known, conventional pieces.” 827 F.3d at 1350.

1 Here, however, claim 27 follows a conventional order of how data is usually analyzed: data is first
2 received, then processed, and then signals are outputted as a result. In its step two analysis in
3 *Electric Power Group*, the Federal Circuit reasoned that “merely selecting information, by content
4 or source, for collection, analysis, and display” does not provide an inventive concept. 830 F.3d at
5 1355. Nor did the claim in *Electric Power Group* “require a new source or type of information, or
6 new techniques for analyzing it,” or “invoke any assertedly inventive programming.” *Id.* The
7 Federal Circuit’s analysis of the claim in *TDE Petroleum Data Solutions, Inc. v. AKM Enterprise,*
8 *Inc.*, 657 F. App’x 991 (Fed. Cir. 2016) (unpublished), was similar. The claim in *TDE Petroleum*
9 was drawn to an “automated method for determining the state of a well operation” that involved
10 receiving signals from the well, validating the signals, and automatically selecting a state of the
11 well operation. *Id.* at 992. After holding at step one that the claim was directed to the abstract
12 idea of data collection and processing, the Federal Circuit held at step two that nothing in the
13 claim brought the claim out of the realm of the abstract idea. *Id.* at 993. Specifically, the Federal
14 Circuit wrote that any argument that there was an inventive concept in the ordered combination of
15 the claim’s steps “would be unpersuasive given that they are the most ordinary of steps in data
16 analysis and are recited in the ordinary order.” *Id.* Accordingly, the Court finds that nothing in
17 the ordered combination of elements recited in claim 27 bring it outside the realm of the abstract
18 idea of data collection and analysis.

19 Because the Court finds at *Alice* step one that the ’301 claims are directed to an abstract
20 idea and at step two that there is no inventive concept sufficient to save the claims, the Court
21 concludes that the asserted ’301 claims are patent-ineligible under § 101. Fitbit’s motion to
22 dismiss the ’301 claims is therefore GRANTED.

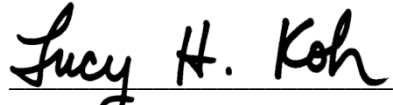
23 **IV. CONCLUSION**

24 For the foregoing reasons, the Court DENIES Fitbit’s motion to dismiss the ’105 and ’299
25 claims. The Court GRANTS Fitbit’s motion to dismiss the ’301 claims.

26 **IT IS SO ORDERED.**

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Dated: March 5, 2018



LUCY H. KOH
United States District Judge